

AV Bridge 20000 Conversion Platform



AV Bridge 20000

Conversion Platform



(local control panel not included with the base configuration)

Standards Conversion with Motion Vector

Standard converts between SD and HD formats with automatic detection of input signal and selectable conversion aperture.

Broadcast-quality 4 field / 4 line conversion algorithm guarantees professional quality.

Motion Vector standards conversion provides a world leading quality in standards conversion. Configurable scene detection is also provided with this option.

Aspect Ratio Conversion

Converts aspect ratios with freely definable factors, zoom and pan/scan settings. Predefined Presets are available for converting from / to 4:3, 16:9 and 14:9.

Aspect Ratio Signaling / WSS is fully supported.

Window sizes and aspect ratios can be displayed in the Remote Control.

Color Correction and Legalizer

The unit features RGB color correction and legalization. Blacklevel, whitelevel and gamma can be controlled independently.

Frame Synchronization & Timebase Correction

A full frame TBC and frame synchronization facility allows even low quality inputs to be interfaced and timed to your facility.

System timing is adjustable and flexible. Genlock reference inputs allow for optimum system integration.

Video Noise Reduction

Powerful recursive video noise reduction and median filtering eliminate random video noise in luminance and chrominance components with a minimum of artefacts. Our long experience in video noise reduction technology ensures that the best results can be derived from impaired input signals.

Detail Enhancement

Horizontal and vertical enhancement (aperture correction) allows crisp clear pictures - even from degraded sources.

Gain, Amplitude and Color Control

Full controls of video gain, black level are available at the touch of a button so that all signals can be corrected before they enter your system.

Time code

- timecode generator and regeneration
- accepts VITC in all VBI lines with auto detection of lines or manual line selection
- receives timecode via DV interface
- accepts SMPTE, RP188 via SDI
- supports VITC, LTC, RP188 and DV timecode at output
- support for EBU and SMPTE standard at LTC input and output

Miscellaneous

- SDI and IEEE 1394-ports
- genlock
- test pattern generator
- transparent processing of VBI

Audio

Video signals almost invariably have an associated audio feed. Any video-processing unit that frame synchronizes or standards converts will have a processing delay which has implications for lip sync.

This unit allows external audio or audio embedded in the serial digital signals to be delayed, re-inserted or extracted as analog, AES / EBU or SPDIF digital, providing amazing system flexibility when audio may need to be monitored, changed or even removed altogether. The flexibility of the audio processing makes this unit suitable for a tremendous array of applications in studio facilities or broadcast environments.

- delay adjustable from 4 ms to 1000 ms for each channel individually
- automatic delay correction
- level adjustable from -∞ to +6 dB for each channel individually
- embedding and de-embedding of analog / AES / SPDIF audio signals
- DV embedder and de-embedder
- support for all 4 SDI audio-groups (16 channels)
- support for sampling rates of 32 / 44.1 / 48 kHz
- fully configurable routing matrix
- DV resampling between 32 kHz and 48 kHz

Presets

In addition to the presets provided for several groups of functions, full panel presets are also available. These allow the store and recall of complete panel setups.

Presets can also be saved and recalled to / from a PC via remote control software.

Remote Control

All functions and features are available via a serial remote connector.

This may be used for computer control, automation system or remote control panel.

Quality

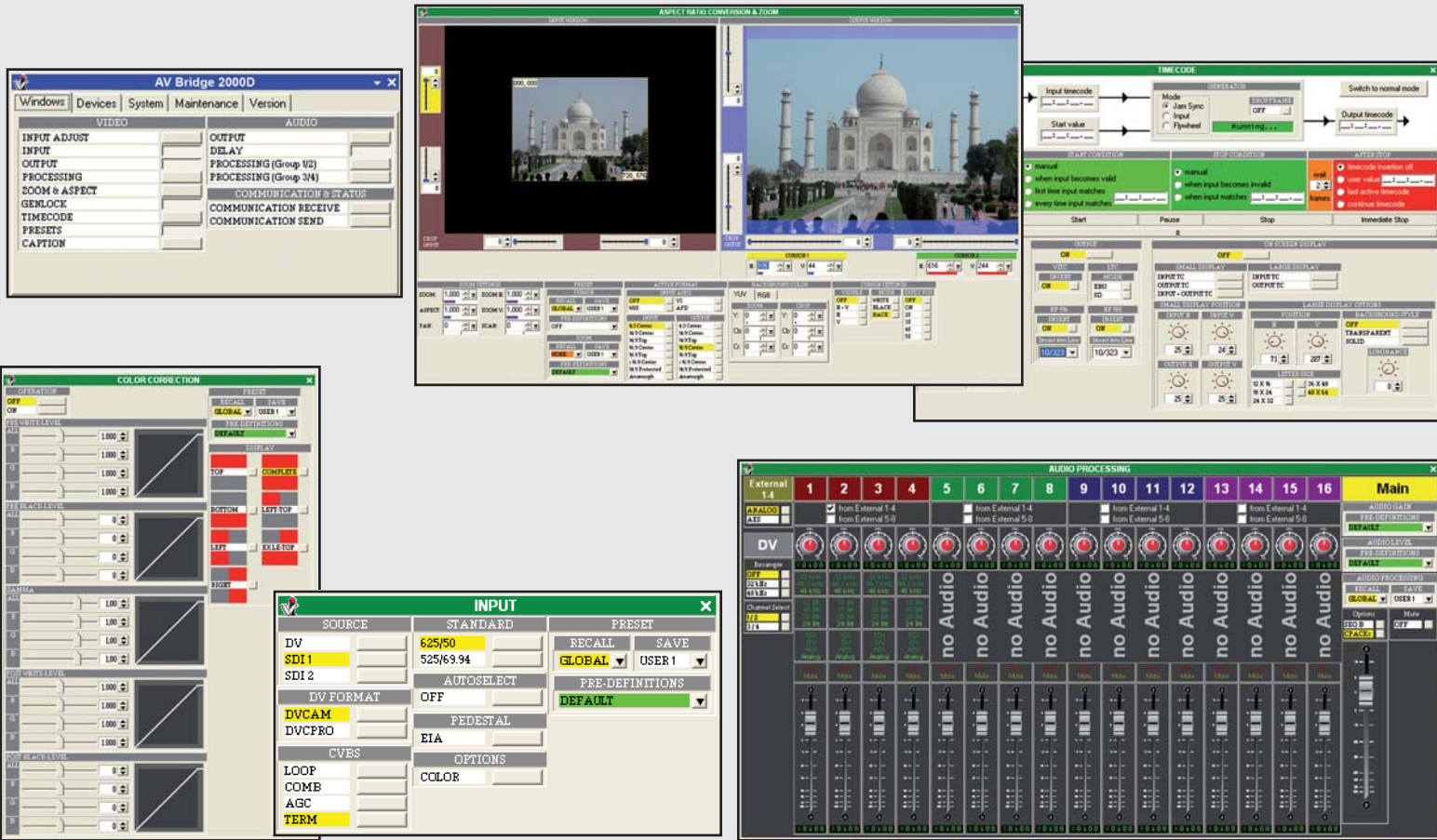
XForm Systems is proud to manufacture high quality equipment for the demanding broadcast and studio facilities markets since more than twenty-five years. Quality is paramount in our design and manufacturing facilities.

MS Windows based Remote Environment

A remote control application for MS Windows based PCs is standard. You can control and monitor every function of the AV Bridge 2000D from your PC, even functions which are not accessible via the local control panel. With a single PC you are able to control as many units as you can connect to monitor the complete state of the system in several windows, one for each group of functions. Adjust the systems settings with graphical control components. You do not have to guess about the results of your adjustment - you are able to see it while modifying it! A PC running MS Windows Vista, MS Windows XP or MS

System Requirements

Windows 2000 with at least 500 MHz and 256 MByte of RAM. The software needs 6 MB of disk space. A screen resolution of at least 1024 x 768 pixels with 64 k of colors is recommended. The communication with the unit is done via a standard RS232-port, alternatively an Ethernet adapter is available.



All Preset functions for the different groups of functions are summarized in the Remote Environment in a single window. That allows a short look into all relevant system functions. You can name the several presets and save them to a file for documentation purposes and later recall them to set up the unit exactly as it was before.

The timecode window allows the definition of timecode procedures with start condition, stop condition, with jam sync and many other features. Monitor input and output timecode simultaneously in the remote or in the on screen display. Just define everything as you want it to be!

The remote environment contains complete audio control for embedded and external audio. You can adjust the level of all channels and route everything as you want.

Complete graphical control of color correction and legalization with a quick overview of all parameters.

Change and monitor the zoom, aspect, pan, scan and crop settings. Helpful predefined presets are available with one mouse click.

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Input Formats and Video Standards

Genlock Analog Black Burst / CVBS / SDI
SDI Serial Digital Component
 ITU BT.656 / SMPTE 259M

Input Video Connectors

Genlock 2 x BNC dual / looping input analog
SDI 2 x BNC

Output Formats and Video Standards

SDI Serial Digital Component
 ITU BT.656 / SMPTE 259M

Output Video Connectors

SDI 2 x BNC

Audio Processing

Audio Delay Time 4-1023ms
 Audio Gain $-\infty$... +18dB
 Internal Processing 32 Bit
 channel swap via routing matrix

Video Processing

Quantizing Scheme 4:2:2 conforming to ITU BT656, SMPTE 259M
 Digital Enhancement Horizontal and Vertical
 Noise Reduction Recursive Y and C up to 20dB
 Full Frame TBC
 4 Field / 4 Line Standards Conversion with spatio temporal motion adaptive interpolation

Frequency Response

Luminance (Y) 5.5 MHz, 0.5 dB
 Chrominance (C) 0.5-1.5 MHz, 0.5 dB
 Differential Phase $<1^\circ$
 Differential Gain $<1\%$
 Signal to Noise Ratio >68 dB CCIR Flat field

Remote Control

RS232C Remote Control 9 D-Sub
 Windows Control Software included

Power Requirements

AC Voltage 90-260V, 50 / 60 Hz
 Power Consumption <100 VA

Physical

Dimensions 44 x 444 x 460mm (H x W x D)
 Weight 8kg approx
 Chassis 1RU 19" Rack mounting,
 Cooling Forced air – cross flow (side to side)



XForm Systems GmbH

Spechtweg 1, D-38108 Braunschweig
 Telephone +49 531 302928 91
 Facsimile +49 531 302928 99
 E-Mail: info@xformsystems.de
 Internet: www.xformsystems.de

Option /HD

(includes Option /SDI, /DV with common I / O)
 conforming to ITU BT656, SMPTE 259M, SMPTE 292M
 Input 2 x BNC
 Genlock1 x BNC (Digital SMPTE292, Trilevel)
 Output 2 x BNC
 Embedded Audio Processing 16 channels 20 / 24 Bit,
 32kHz / 44,1 kHz / 48 kHz

OUT \ IN	625I50	720P50	720P25	1080I50	1080sF25	1080P25	1250I50	525I59	720P60	720P59	1035I60	1035I59	1080I60	1080I59	1080sF24	1080sF23	1080P24	1080P23
625I50																		
720P50			1)															
720P25	1)	1)	1)	1)	1)	1)	1)	1)										
1080I50																		
1080sF25			1)															
1080P25			1)															
1250I50			1)															
525I59			1)															
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1080sF24																		
1080sF23																		
1080P24																		
1080P23																		

- Conversion possible
- Conversion not possible
- Conversion possible for 3:2 material
- Conversion possible for 2:1 material
- Conversion will be available soon
- 1) Standard does not support embedded audio

Option /DV

supports IEEE 1394, DV / DVCAM / DVCPRO25 525 / 625 lines
 two Firewire connector (6 Pin)
 • /HD Option not installed: supports I / O simultaneously
 • /HD Option installed: supports either Input or Output

Option /MV

motion vector compensated standards conversion
 with scene / cut detection

Option /CC

RGB Color Corrector and Legalizer

Option /TC (requires /SDI or /HD or /DV)

LTC In- and Output, BNC, format EBU / SMPTE
 VTC, SMPTE RP188
 60Hz DropFrame and non-DropFrame

Option /AEB

Analog / AES Audio Embedding / Deembedding
 Digital Audio AES or SPDIF 32kHz / 44.1kHz / 48kHz up to 24 Bit
 ADC/DAC Resolution 24 Bit
Analog In 4 x Mini-XLR (balanced)
Digital In 2 x BNC
Analog Out 4 x Mini-XLR (balanced)
Digital Out 2 x BNC

Option /KBAVB2000

local control panel

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